



UPDATE Weekly

January 6, 2012

Edition: 01

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Below are articles and summaries of **magnesium** related stories. Members are asked to distribute the update to their employees – if their employees wish to receive the IMA Weekly Update, please send their email addresses to IMA Headquarters. We appreciate your company press releases and announcements for inclusion in the Weekly Update.

INDUSTRY CALENDAR

March 28-30, 2012

Asian Metal's World Magnesium Forum
Xi'an, Shaanxi Province, China
<http://www.asianmetal.com/Events>

May 20-22, 2012

IMA Annual Conference
San Francisco, California, USA
www.imaworldconference.org

July 8-12, 2012

9th International Conference on Magnesium
Alloys and their Applications
Vancouver, Canada
www.magnesium2012vancouver.com/welcome.html

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ASSOCIATION NEWS

IMA Awards of Excellence – 2012 Call for Entries, due by January 15, 2012

IMA Environmental Responsibility Award – 2012 Call for Entries, due by January 15, 2012

2011 IMA Awards of Excellence Winners Announced in “Mg Showcase” – Winter 2012 Edition

IMA Announces 2012 Annual Conference Dates

Articles follow below

INDUSTRY NEWS

Magnesium Synthesis

Article Provided by Infinity Chemical Engineering (05-Jan-2012)

US Magnesium Die-Casting Sector Not Expected to Grow in 2012

www.metal-pages.com (04-Jan-2012)

Articles follow below

CHINA'S LATEST NEWS

China Magnesium Industry and Market Bulletin

www.chinamagnesium.net (04-Jan-2012)

Articles follow below

EDITOR'S NOTE: IMA makes every possible effort to substantiate the articles which appear in the Weekly Update. However, as this is not always possible IMA does not warrant the details nor accuracy of any given article. Please keep in mind that materials are attained through press releases, outside articles from numerous sources and publications. Such materials often contain opinions which are not that of the association nor should they be construed as such. We realize that in the case of some materials, the translations might often lead to less than perfect grammar, etc. It is our position however to print as submitted rather than take upon ourselves the editing of such materials which would entail potential changes unwanted by any given author.

ASSOCIATION NEWS

IMA Awards of Excellence – [2012 Call for Entries](#), due by January 15, 2012

Established in 1962, IMA's Awards of Excellence program is an annual program open to all companies demonstrating outstanding examples of **magnesium's** use. Nominations are judged by a panel system of peer reviewers.

Fill out the entry form and submit it along with photos (digital in jpg or tif format, 300 dpi, or printed) of your entry and descriptive, supportive material. Digital materials are preferred. Original parts are not required as part of your entry. Winners will be required to supply samples for the 2012 Annual Conference.

You can download the entry form here or paste the URL in your browser:

http://intlmag.org/assets/pdfs/2012IMA_AwardsExcellBrochure.pdf

IMA Environmental Responsibility Award – [2012 Call for Entries](#), due by January 15, 2012

IMA recognizes companies that are playing an active role in reducing the **magnesium** industry's carbon footprint and that exemplify the industry's commitment to environmental responsibility. The IMA International Environmental Responsibility Award will be presented each year at the IMA Annual World Magnesium Conference.

The award(s) are presented based on the achieved and documented reduction of carbon dioxide equivalents within the calendar year preceding the Annual World Conference. It is intended to include all aspects of the **magnesium** industry from primary production through to end-user industries. Judging will be conducted by an international panel of experts.

You can download the entry form here or paste the URL in your browser:

http://intlmag.org/assets/pdfs/2012IMA_Enviro_flyer.pdf

2011 IMA Awards of Excellence Winners Announced in “Mg Showcase” – Winter 2012 Edition

The 2011 IMA Awards of Excellence Winners have achieved exceptional **magnesium** components through different forming methods, yet they share the common thread of achieving innovative designs that maximize **magnesium's** potential, significantly contributing to each product's success in the marketplace. The 2011 IMA Environmental Responsibility Award Winner demonstrates how taking environmental steps forward with carbon credits and SF6 reduction can enhance **magnesium** production quality to meet the most stringent customer standards. [Click here to read more!](#)

IMA Announces 2012 Annual Conference Dates

The 69th Annual World Magnesium Conference will be held in San Francisco, California, USA on May 20 – 22, 2012. The event will take place at the Fairmont San Francisco. The World Magnesium Conference is the premier international **magnesium** conference that highlights the industry's latest technological advances, innovative applications, and emerging developments in the global marketplace. The conference combines informative technical sessions, exhibits, networking opportunities, as well as social activities and tours for a well-rounded industry experience. In addition, winners of the 2012 Awards of Excellence—IMA's competition recognizing outstanding **magnesium** products and innovative manufacturing technologies—will be announced during the World Magnesium Conference. Additionally IMA will recognize environmentally progressive and responsible companies in the 2012 International Environmental Responsibility Award competition. Preliminary information may be found at: www.imaworldconference.org.

INDUSTRY NEWS

Magnesium Synthesis

Article Provided by Infinity Chemical Engineering (05-Jan-2012)

Infinity Chemical Engineering was founded in 1992 and in 2009 the organization was incorporated to Infinity Chemical Engineering, LLC. Over the last decade Infinity Chemical Engineering produced several new industrial technologies that uniquely have environmentally safe applications. These are in the fields of renewable energy, in hydrometallurgy, also in the processing of nuclear wastes and the recycling of industrial wastes.

Infinity Chemical Engineering is a diverse organization with individuals specializing in science, nuclear energy, and engineering. We concentrate on providing best solutions to our client's needs.

"Our mission is to work with organizations and governments around the world to provide environmental friendly solutions to enhance the quality of life".



Infinity Chemical Engineering developed an innovative process of producing pure **magnesium** powder with significant and remarkable implications for a broad range of industries and economic sectors. The patent pending technology has been in development since the early 1990's. It is environmentally friendly, remarkably efficient, and approximately three times less expensive than currently utilized methods.

Magnesium is central to human society and technology. Commonly utilized today in the aviation, automotive, and electronics industries, the metal has been used in various capacities for centuries due to its signature strength and lightness. Current research suggests enormous potential for **magnesium** in the alternative energy and transportation fields; however, current production methods for **magnesium** (primarily the electrolytic "salt melt" and the silicothermic Pidgeon process) are broadly considered to be cost-inefficient. As a result, many of **magnesium's** potential applications have not yet been pursued.

The majority of **magnesium** production businesses rely on the Pidgeon method, a thermal process in which a compound is heated until it produces a **magnesium** vapor which is subsequently distilled. The rest of **magnesium** producers rely on the electrolytic method, a process involving the electrolysis of **magnesium** chloride derived from brine or sea water. Although both of these processes have relative advantages and disadvantages, they have proven over decades of practice to be energy-inefficient, labor intensive, and environmentally unfriendly. This has resulted in many industries underutilizing **magnesium**

due to inflated prices resulting from high production costs and expensive waste regulations. Infinity Chemical Engineering's patent pending process will fill an urgent market need by lowering the overall production cost of pure **magnesium** and nearly eliminating environmental risks. The automotive industry in particular will immediately seek to take advantage of these market changes in an effort to reduce overall vehicular weight to reach new federal mileage standards.

Infinity Chemical Engineering's innovative **magnesium** production method lowers production costs by nearly two thirds, creates potential for additional chemical byproducts, and is capable of being fully automated with little technical complexity or construction expenses. This process has already been developed and tested on commercial scale, demonstrating the method's tangible benefits and potential.

Given the significance of Infinity Chemical Engineering's product, the Company is positioned to usher in a new wave of innovation and potentially redefine the **magnesium** industry. Infinity Chemical Engineering will be providing this technology for the international **magnesium** industry, an economic sector that has experienced decline in recent years due to the global recession and decreases in demand.

Infinity Chemical Engineering's patent pending process uses eletrodialysis, which requires a very small amount of energy that can be generated from solar power or even a typical power outlet. Water base **Magnesium** chloride solution is processed through a membrane-hydrometallurgical dialysis unit. This unit produces pure **magnesium** in a powdered form and a small amount of hydrogen gas, which can be captured and utilized for other applications. This is the first form of **magnesium** production that does not produce waste, requires little energy to complete, and is capable of full automation.

As previously noted, the Company's process is a significant and remarkable improvement by nearly every possible metric compared to the electrolytic method and the Pidgeon method. The chart below shows Infinity Chemical Engineering's method's advantages over the conventional salt melt electrolysis method.

COMPETITIVE COMPARISON

COMPARATIVE CRITERION	CONVENTIONAL METHOD OF SALT MELT ELECTROLYSIS	ICHEM METHOD
Estimated cost of production of 1 ton Mg from different raw materials	1,640-2,900 USD	500-750 USD
Exploitation expenses	High	Low
Technical complexity	High	Low
Expenses for plant construction	High	Low
Possibility of recovery of used chemicals	No	Yes
Waste existence	Yes	No
Negative impact on the environment	Yes	No
Water consumption	High	Low
Electricity consumption	High	Low
Possibility of process automatization	Partial	Full
Form of obtained product	Ingot	Powder
Requirements for used raw material	Absence of admixtures and water	Absence of admixtures

US Magnesium Die-Casting Sector Not Expected to Grow in 2012 **www.metal-pages.com (04-Jan-2012)**

The US **magnesium** die-casting industry is not expected to grow this year as domestic producers continue to battle against low cost imports amid the lingering imposition of anti-dumping duties on raw material, according to the North American Die Casting Association (NADCA).

The beleaguered sector shipped about 50 million pounds of material in 2011, which was roughly flat with the past two years, and is not expected to post gains again in 2012, NADCA president Daniel L. Twarog told Metal-Pages.

It comes despite ongoing growth in the key end-user market of automotive with sales continuing to strengthen.

"Magnesium is flat because the tariffs have effectively killed the die-casting industry in the US," said Twarog.

"The tariff placed on **magnesium** means that domestic die-casters can't compete with Canada, Mexico and the rest of the world when they are paying \$1 per pound more for **magnesium**."

TrueCar.com and J.D. Power and Associates recently reported that they expect total light-vehicle sales in the US to total about 13.8 million units next year compared with about 12.8 million in 2011.

"Magnesium die-casting and applications are growing world-wide. But in the US the sector is contracting, while a lot of the demand for applications is being met with production from Mexico and Canada," said Twarog.

In comparison, the US aluminum die-casting industry is expected to grow about 5% this year after posting shipments of around 1.6 billion pounds in 2011.

In June, NADCA slammed a decision by the US Commerce Department to uphold a previous ruling to place an anti-dumping duty of 111.73% on **magnesium** from China's Tianjin Magnesium International Co. Ltd. (TMI) for the period between May 1, 2007 and April 30, 2008.

The association said the decision would further impact downstream consumers of **magnesium** as supplies of raw material remained squeezed, which has helped underpin prices.

Previous anti-dumping duties placed on Russian-produced **magnesium** has also impacted exports of metal to the US by companies such as VSMPO-Avisma Corp.

The price of pure **magnesium**, min 99.9% delivered, ran up to a peak of \$2.45-2.60/lb. delivered in June on increased demand and a supply pinch. But has since drifted back to a level of \$1.90-2.20/lb. delivered.

Demand for pure **magnesium** in the US is expected to remain flat this year and recently concluded contracts for 2012 were settled in a range of \$2.00-2.20/lb compared with a wide range of \$2.30-2.60/lb in 2011.

Part of the downward trend comes as market participants have reported offers for **magnesium** from Malaysia-based CVM Minerals as the company's smelter in Perak looks to secure a foothold in the US market. The US's sole **magnesium** producer US Magnesium LLC has also ramped-up production before the year-end.

Magnesium is used mostly to make aluminium alloys for use in car production, and to remove sulfur in steel and iron production, as well as titanium production.

Meanwhile, the US Commerce Department's International Trade Administration (ITA) set in December a final anti-dumping duty margin of zero on Tianjin Magnesium for the period of May 1, 2009 to April 30, 2010 after ruling it did not make sales at less-than-normal value.

CHINA'S LATEST NEWS

China Magnesium Industry and Market Bulletin

www.chinamagnesium.net (04-Jan-2012)

Market Focus

The Magnesium Market Seen Weak on the Upcoming Spring Festival Holidays

From December 26th to December 30th, ex-works quotations for 99.9 minimum ingots from leading production bases decreased a little as indicated in Shanxi from 16,400 – 16,700 yuan, Shaanxi from 16,100 to 16,300 yuan and Ningxia from 16,400 – 16,700 yuan. Export prices stayed at 2,970 - 3,020 US dollars.

In Fugu, one source said they quoted at 16,100 yuan, slightly lower than the previous week. Fugu's stock level is high. The price is estimated to drop at the beginning of 2012 but won't be much.

One Shanxi-based trader confirmed with the weak market and quotations. He said that this week's contract volume was really limited. Also, he thought the prices will drop further after January 1st.

The prevailing view was that the market will be still weak, since downstream industries aren't in good conditions and buyers won't buy for a large amount.

Industry News

China Exported 367.4 kt of Magnesium for January - November, Up 3.88%

For the past 11 months, China's exportation of **magnesium** totaled at 367.4 kt, up by 3.88% compared with 2010's 353.7 kt, based on the statistics of China Customs.

Among the exports, **magnesium** ingots was 172.2 kt, a decrease of 1.48% y-on-y; **magnesium** alloy 90.3 kt, up by 12.01% y-on-y; **magnesium** powder & granules 79.6 kt, an increase of 1.98%; wrought **magnesium** 14242.8 tons, up by 138.14% y-on-y; and **magnesium** articles 10391.8 tons, down by 23.43% y-on-y.

2 Billion Rmb Invested Into the Salt Lake Magnesium Project

For 2011, up to 2 billion Rmb has been invested into the Salt Lake **magnesium** project, sourced from the Economic and Trade Commission of Qinghai province.

Shanxi Yinguang Group Gets Recognized as National Level Supplier of Military Magnesium Alloy

Lately, through efforts, Yinguang Magnesium Group got certified by the National Development and Reform Commission as the national level military **magnesium** alloy supplier. With the spirit of timely and necessary preparation for usual and urgent military affairs, the certification will lay a solid foundation for the development of defense related business for the company.

Magnesium alloy is increasingly becoming the new choice for many fields, especially in the military area, which is getting attentions from the central government. For Yinguang Magnesium Group, which is for many years on the way of deep processing of **magnesium** alloy, it is an opportunity for entering into the military defenses.

China Direct Industries Provides Update for its Magnesium Segment Sales

China Direct Industries, a U.S. based company that produces, sources, and distributes industrial commodities in China and the Americas and provides cross border corporate advisory services announced today that its **magnesium** segment operations received five new purchase contracts from existing customers, including major Fortune 500 companies, valued at approximately \$11.0 million in December of 2011 for delivery over the next six months.

Commenting on the contracts, Dr. James Wang, Chairman and CEO of China Direct Industries, Inc., stated "We are pleased to see an increase in orders and quoting activity as we head into calendar 2012.

We believe that our **magnesium** segment will strengthen further throughout the coming year as economic conditions which weakened short term demand begin to abate."

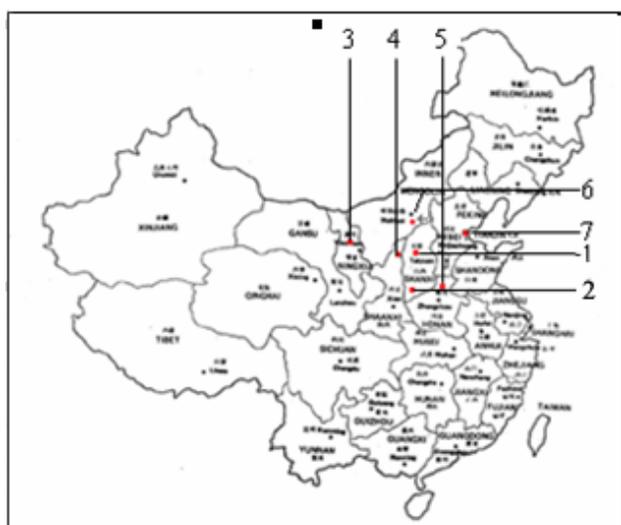
Price Indicators

Sunlight's Price, Pure Magnesium (>99.8%) and Aluminum

Item		Magnesium Price	Unit
Shanxi Province	Taiyuan City,ex-works ¹	16400-16700	RMB yuan/ton
	Yuncheng City,ex-works ²	16500-16800	RMB yuan/ton
Ningxia Autonomous Region, ex-works ³		16400-16700	RMB yuan/ton
Shaanxi Province, ex-works ⁴		16100-16300	RMB yuan/ton
Henan Province, ex-works ⁵		None	RMB yuan/ton
Inner Mongolia Autonomous Region, ex-works ⁶		None	RMB yuan/ton
FOB Xingang, Tianjin ⁷		2970-3020	USD/ton
CIF, Rotterdam Port		3060-3120	USD/ton
CIF, Toronto Port		3120-3170	USD/ton
Date	SHFE Spot Aluminium	Unit	
26-Dec-2011	15980/	RMB yuan/ton	
30-Dec-2011	16080/	RMB yuan/ton	

SHFE: Shanghai Future exchange

(Exchange Rate of USD versus RMB is 6.2861 on Dec. 30^h based on <http://www.boc.cn/>. We place a Chinese map here to mark the major production bases and Xingang Port of Tianjin for your reference.)



Note:

1. All the ex-works prices are VAT-paid.
2. The FOB price is based on ex-works basis, plus inland freight and miscellaneous expenses at Xingang Port of Tianjin. Because the distance from these six production bases to Xingang Port is different, their land freights also vary. FOB price includes 10-percent exports tariff from Jan. 1, 2008.
3. CIF prices are based on FOB price plus ocean freight and insurance, which will also vary time by time.
4. When getting ex-works price and FOB price, we give some weight numbers to each respondent and then get the weighted average prices.



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